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JUL 25 1995

From: Paul Waldo <pwaldo@rmii.com>  
To: A16.A16(RM-8653)  
Date: [REDACTED]

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of

Allocation of Spectrum in the 5 GHz Band  
Component of the National Information Infrastructure  
(RM-8653)

To Establish a Wireless

I believe that RM-8653 is the best proposal for the use of these frequencies. This would place their use in the hands of general public, rather than large corporations. Please consider adopting RM-8653. Thank you for your consideration.

Paul Waldo  
1825 Westmoreland Rd  
Colorado Springs CO 80907

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From: California Wireless Incorporated <cwi@rahul.net>  
To: A16.A16(m-8853)  
Date: [REDACTED]  
Subject: Comments on "NII" band petition by Apple

JUL 25 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

Hello,

I am hereby supporting fully the Apple "NII" band petition that requests allocation of 300 MHz of spectrum to this service.

I believe it would be a tremendous boon to consumers, businesses, students, and many others we cannot at this time anticipate.

There seems to be no downside, either.

Therefore, I urge the Commission to adopt rules to permit these frequencies to be used for data transmission as proposed by Apple Computer, Inc.

Thank You.

-Mike Cheponis  
Amateur Radio Station License K3MC  
618 Enos Court  
Santa Clara, California 95051 email: mike@wireless.com

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From: Don Wallenberg <don\_wallenberg@qmgate.dsccc.com>  
To: A16.A16(RM-8853)  
Date: [REDACTED]  
Subject: [REDACTED]

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JUL 25 1995

I support Apple's proposal for a public-domain wireless spectrum allocation as part of the National Information Infrastructure. Please allow this to happen.

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Thanks,  
Don Wallenberg

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From: <jack@his.com>  
To: A16.A16(rm-8653)  
Date: [REDACTED]  
Subject: DO IT

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Thank you for the opportunity to add my voice to the growing chorus in support of a public spectrum set-aside. Apple's proposal is potentially empowering to a very broad segment of the people, and merits your endorsement and positive action. The FCC has always been at its best, and served the people best, in a proactive mode rather than a protectionist mode. Here is an important opportunity to give life to a visionary perspective, rather than merely regulate against some potential greed.

—  
Jack Hirschfeld

Don't you know, you fool, you never can win? jack@his.com

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**From:** Jon Cimuchowski <jonc@u.washington.edu>  
**To:** A16.A16(m-8853)  
**Date:** [REDACTED]  
**Subject:** Apple proposal

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JUL 25 1995

I would like to state that I'm in favor of the Apple proposal to release large amounts of spectrum for public use with spread-spectrum broadcasters with no fees or taxes. It is important to keep information services easily available to the public.

FEDERAL COMMUNICATIONS COMMISSION  
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Thank you, Jon Cimuchowski

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From: Thad Stamer <testame@media.mit.edu>  
To: A16.A16(m-8653)  
Date: [REDACTED]  
Subject: RM-8653 In Support of the NII Band

July 24, 1995

Mr. William Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

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JUL 25 1995  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

RE: RM-8653 In Support of the NII Band to Promote U.S.  
Productivity and to Help the Disabled

I am writing in support of the petition filed by Apple Computer, Inc. for an NII band for public use.

I am a researcher at the MIT Media Laboratory whose specialty is wearable computing. Wearable computing involves small computing devices and peripherals that are worn as clothing. For example, my personal system involves a display imbedded in my glasses, a one-handed keyboard, a small CPU, and a network connection. Unfortunately, the network connection is through a local cellular carrier, which is not sufficient for these purposes. Not only are these types of services too expensive, but they also handle a very limited amount of bandwidth and have a tendency to handle transitions between sites badly. Additionally, the cellular carriers have been slow in adopting adequate technology for data services.

Much of the research that is done in the wearable computing community assumes network connectivity. Unfortunately, while bandwidth is available for researchers, it can not be assumed for the general populace as of yet. Thus, much of our work related to helping those with low vision, augmented reality, and context sensitive "help" agents is considered to be interesting research but of little practical use. This is especially true because this research often centers around real-time video rates. With 300Mhz of bandwidth available to the public, our goals could change dramatically.

Suddenly it may be practical to use such systems to allow the (legally) blind to see.

Wearable computing and related technologies will significantly increase productivity in the next decade. As Prof. Malone said in the recent special issue of Scientific American, this revolution will be about communication, not production. Wearable computers will provide an unparalleled ease of interaction with both people and computers. They will also significantly increase their users' abilities to remember and associate data. However, without a cheap, high bandwidth communication medium, the potential is limited to the machinery that the user carries. Thus, I feel that an economical and open communications medium will significantly increase individual worker productivity in the next decade.

An option, of course, is to license the spectrum. However, the past has shown how this can slow innovation. Only large corporations or those with complex cross-agreements can hope to start and succeed in this arena. Thus, the smaller, faster-moving innovative companies tend to look for easier markets. Similarly, researchers tend to avoid the licensed spectrum. Even the simple restrictions on the amateur bands have caused many researchers, including myself, to look elsewhere for our communications needs. However, with the adoption of Apple's proposal, equipment manufacturers will begin to offer practical communication options, which will spur more applications and research, which will spur more communications hardware, and so on. Current research programs are waiting for such an opportunity and already have in-house applications that demonstrate the need for the medium. What is required now is the bandwidth.

Thad Stamer

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JUL 25 1995

CC MAIL ROOM

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Office of the Secretary  
Federal Communications Commission (FCC)  
Washington DC 20554  
Reference RM-8653

Please support Apple's proposal  
to provide greater power on the airwaves  
to the public. The N11 band proposal  
is brilliant and very much needed.

Thank you,

Samir Kamra  
4548 Fairbairn  
Oakland CA 94619  
(510) 532 0193  
fax (510) 261 2740  
email curious@best.com

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WASHINGTON OFFICE:  
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(203) 886-0139

94 COURT STREET  
MIDDLETOWN, CT 06457  
(203) 346-1123



# Congress of the United States

## House of Representatives

Washington, DC 20515

July 14, 1995

Mr. William Caton, SEC  
Federal Communications Comm.  
1919 M St NW  
Washington, D.C. 20554

Dear Mr. Caton:

I am writing to convey the opinion of one of my constituents. Charles H. Logan wrote to my office after having read of the Apple Computer petition regarding a large block of frequencies from which any American could benefit, free of charge. The article also indicated that the public opinion poll had been completed, but Mr. Logan and I hope that he can still offer his viewpoint.

I have included a copy of Mr. Logan's letter in the hopes that you will still accept comments. Mr. Logan strongly supports the Apple Petition. He believes that it is right to serve the public interest because the government exists for that sole purpose. I hope that, at this late date, you can still take Mr. Logan's insight into consideration.

Thank you for your help and if you have any questions, please feel free to contact me or my staff at (202) 225-2076.

Sincerely,

SAM GEJDENSON  
Member of Congress

SG/jm

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List ABCDE

SAM GEJDENSON  
2D DISTRICT  
CONNECTICUT

COMMITTEE ON  
INTERNATIONAL RELATIONS  
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POLICY AND TRADE  
SUBCOMMITTEE ON  
ASIA AND THE PACIFIC

COMMITTEE ON RESOURCES  
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AND OCEANS  
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RM-8653  
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CLERK OF THE  
HOUSE OF REPRESENTATIVES  
JUL 25 '95



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344 Mansfield Rd., U-68  
Storrs CT 06269-2068

JUL 25 '95

July 12, 1995

FEDERAL COMMUNICATIONS  
COMMISSION  
SECRETARY

The Honorable Sam Gejdenson  
U.S. House of Representatives  
1410 Longworth Building  
Washington DC 20515

RM - 8653  
RM - 8648

Dear Mr. Gejdenson:

I am writing to solicit your support for the proposal by Apple Computer that the FCC set aside a large block of frequencies that any American could use, without fee. I don't know what role Congress is playing in this idea at this point, but according to today's newspaper, the FCC has just finished collecting public comment. Since I had no prior opportunity to make any comment to FCC, I am hoping that you will convey my sentiments to them, as well as make note of them for the time that Congress does become involved in the issue.

The Apple proposal requests 300Mhz be set aside for community-wide broadcasting. A counter-proposal by telephone companies suggests 250 Mhz with a very limited range, suitable for only within-building broadcasting. Those restrictions would help the phone companies protect themselves from competition.

The public interest, as opposed to the interest of the phone companies, would be served better by the Apple proposal, which would allow unlimited innovation and experimentation with new technologies and services. In effect, it would create a small area of air space for the Internet. It is impossible to predict the advances this could lead to, and that is precisely why it should be as broad and as unrestricted in form as possible. Do not let the phone companies control or restrict this exciting new realm of communication and invention.

Congress may be worried that the federal government may lose some money by giving away a small part of the spectrum instead of auctioning it off. I think that is looking at it backward. The spectrum should be seen as belonging, originally and inherently, to The People [or to nobody, which is another way of saying the same thing]...not to the government. Reserving 300 Mhz for unlicensed public use would be giving back to the public what is rightfully its in the first place. The federal revenues that would be "lost" would remain in the hands of taxpayers, who can decide for themselves what is the best and highest use of that money.

Sincerely,

Charles H. Logan

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JUL 25 1995

From: Rick Crawford <crawford@cs.ucdavis.edu>  
To: A18.A18(RM-8653,RM-8648)  
Date: 7/24/95 10:57pm  
Subject: Comments on NII BAND petition

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of )

)  
Allocation of Spectrum in the 5 GHz Band  
To Establish a Wireless Component of the  
National Information Infrastructure )

RM-8653

DOCKET FILE COPY ORIGINAL

In the Matter of )

)  
Petition for Rulemaking to Allocate  
Service Rules for a Shared Unlicensed  
Personal Radio Network )

) RM-8648 the 5.1 - 5.35 GHz Band and Adopt )

Comments of Richard H. Crawford

I submit these comments to the petition for rulemaking filed by Apple Computer, Inc. ("NII Band Petition") and by the WINForum ("WINForum Petition") in the above referenced matters. I am filing as a private citizen, and as a computer researcher who has published peer-reviewed articles on information security and the social impacts of networking technologies.

I have no financial interest in Apple Computer; I do not even use their equipment. Nevertheless, I find the vision embodied in Apple's NII Band Petition to be vastly superior to that of the WINForum Petition, when the overall benefits to society are considered.

The WINForum Petition is another in an endless series of proposals based on private, for-profit concerns. Any benefits to the public good that might accrue from granting the WINForum Petition would be in the nature of "trickle-down" benefits. As such, it is highly unlikely the benefits would be distributed equitably; instead, the bifurcation of our society into the Info-rich and the Info-poor would be exacerbated thereby.

The contrast between Apple's NII Band Petition and the WINForum Petition is striking. In an era when previous FCC licenses have become sinecures, and new segments of spectrum are auctioned off to the highest bidders for exclusive licensing, it is imperative that some portions of the spectrum be reserved for public uses, rather than subordinating all our diverse and fundamentally incommensurable values to monetary considerations.

I find the Comments filed 10 July 1995 by AT&T to be disingenuous.

In particular, the FCC should be far less concerned that its actions might "devalue" certain private goods (existing PCS licenses), and far more concerned that its pattern of actions to date has "already" devalued vitally important public goods. With all due respect, the FCC has, perhaps unavoidably, been a party to the internalization of benefits, and the externalization of costs onto society at large.

The FCC now has an opportunity to mitigate those detrimental externalities by issuing a notice of proposed rulemaking in support of the NII Band.

By reducing the cost of a high-bandwidth "last mile" connection to a NII, the intermediate-distance NII Band would directly benefit schools, libraries, small businesses, rural communities, Native Americans, and individual citizens. By ensuring "bi-directional" access, many more people would be empowered to act as information "producers", not merely passive consumers. The benefits

— diversity of content, freedom of choice, and genuine economic competition (vs. oligopolistic joint ventures and strategic alliances) — would be immense.

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To serve the public interest, it is incumbent on the FCC to promote such a genuinely-Free Speech zone, a "public" space for discourse unconstrained by one's ability to purchase or lease spectrum.

An objection could be raised that such a scheme inevitably would lead to a "Tragedy of the Information Commons". On the contrary, hardware-imposed rules (e.g. spread spectrum techniques) could assure "equitable" sharing of the frequencies, thereby obviating that common (albeit misplaced) criticism. In fact, evidence to date tends to implicate privately "owned" sinecures (i.e., broadcast licenses) as zones of common tragedy, in which an informed citizenry and the free flow of information have been sacrificed to the tyranny of profit maximization. Traditional profit-oriented mass media gatekeepers have performed poorly in promoting a healthy and free flow of information. The FCC must encourage new paradigms of communication for the public good.

I fully support the following statements in Apple's original petition:

---

"The rules governing the NII Band must assure that all devices retain an equitable right to access and share the spectrum resource. In particular, they must prohibit any ... requirement (or exceptional priority) for centralized 'gatekeepers.' ... users must be free ... to communicate without obtaining the approval of, or deferring to, any type of hegemonic controller."

---

Such minimal rules governing the NII Band could help reduce the widening gaps between our nation's Info-haves and Info-have-nots.

Finally, the FCC should consider the NII Band in the light of the values that motivated the now-defunct Fairness Doctrine. Fairness and communications "equity" are values that implicitly underpin our First Amendment rights. Yet the objections stemming from conventional implementation of the Fairness Doctrine are well known -- e.g., to require a Right of Reply in the print media is seen as a government infringement on the freedom of those who own a particular press, and to require Equal Time on a broadcast channel becomes problematic because rarely are there only two sides to a controversy.

The NII Band has the potential for providing the benefits of the Fairness Doctrine without incurring its liabilities. If the NII Band's implicit requirement for equitable and bi-directional communications is honored, it will promote affirmative Equal Rights of communication access, regardless of race, gender, or monetary resources.

The FCC should recognize that the NII Band offers the best opportunity in years to promote a genuine and bi-directional free marketplace of ideas, a forum that is desperately needed to improve the degraded and impoverished discourse that now afflicts American society.

For various reasons -- including, but not limited to -- those stated above, I support the petition for rulemaking filed by Apple Computer, Inc., and oppose the petition filed by the Wireless Information Networks Forum.

Let me also take this opportunity to thank the FCC for accepting comments filed via email.

Respectfully submitted,

Richard H. Crawford  
Computer Science Dept., Univ. of Calif, Davis.

2804 Ganges Ave.  
Davis, CA 95616

24 July, 1995